

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 8545 (1977): Loom Pickers [TXD 14: Machinery for Fabric Manufacture]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE



IS : 8545 - 1977

Indian Standard
SPECIFICATION FOR
LOOM PICKERS

UDC 677.054.73



© Copyright 1977

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Price Rs 5.00

Gr 3

December 1977

Indian Standard

SPECIFICATION FOR LOOM PICKERS

Textile Mill Leather Articles Sectional Committee, TDC 21

Chairman

SHRI NAVIN C. DOSHI

Representing

Association of Merchants & Manufacturers of
Textile Stores & Machinery (India), Bombay

Members

SHRI J. L. MASCAVENHAS	} (Alternates to Shri Navin C. Doshi)	
SHRI N. G. KAMAT		
SHRI S. A. BANDEKAR		The Millowners' Association, Bombay; and The Bombay Dyeing & Mfg Co Ltd, Bombay
SHRI I. N. RAO (Alternate)		The Bombay Dyeing & Mfg Co Ltd, Bombay
SHRI E. P. BHARUCHA		Government of Maharashtra
SHRI K. R. BIKSHESWARAN		Tullis, Woodroffe & Co Ltd, Madras
DEPUTY DIRECTOR (LEATHER), SMALL INDUSTRIES SERVICE INSTITUTE, BOMBAY		Office of the Development Commissioner (Small Scale Industries), New Delhi
DIRECTOR OF TECHNICAL EDUCATION PRINCIPAL, INSTITUTE OF LEATHER TECHNOLOGY, MADRAS (Alternate)		Government of Tamil Nadu
SHRI A. K. GANGULI		Indian Jute Industries' Research Association, Calcutta
SHRI R. S. GHOSH		Directorate General of Technical Development, New Delhi
SHRI J. S. BIST (Alternate)		
SHRI A. JALIL		The Tannery and Footwear Corporation of India Ltd, Kanpur
SHRI C. D. C. KARAKA		Pickers Ltd, Ahmadabad
SHRI I. M. MANSURI		The All India Picker and Textile Leather Manu- facturers' Association, Ahmadabad
SHRI S. P. PANDIT		The Western India Tanneries Ltd, Bombay
SHRI R. G. PARIKH		Hides and leather Products Private Ltd, Ahmadabad
SHRI V. B. PRATAP		The Ahmadabad Mill Owners' Association, Ahmadabad
SHRI B. K. BARIHAN (Alternate)		
SHRI T. RAMACHANDRA RAO		Office of the Textile Commissioner, Bombay
SHRI P. K. GANGOPADHYAYA (Alternate)		
SHRI K. T. SARKAR		Central Leather Research Institute (CSIR), Madras
SHRI W. N. PANDAV (Alternate)		

(Continued on page 2)

© Copyright 1977

INDIAN STANDARDS INSTITUTION

This publication is protected under the *Indian Copyright Act* (XIV of 1957) and reproduction in whole or in part by any means except with written permission of the publisher shall be deemed to be an infringement of copyright under the said Act.

(Continued from page 1)

Members

SHRI C. G. VENKATARAMANAN

SHRI P. D. KIMOTHI (*Alternate*)

SHRI K. B. VORA

SHRI U. C. SHARMA (*Alternate*)

SHRI S. M. CHAKRABORTY,
Director (Tex)

Representing

Ahmadabad Textile Industries' Research Association,
Ahmadabad

The Textile & Allied Industries Research Organiza-
tion, Vadodara

Director General, ISI (*Ex-officio Member*)

Secretary

SHRI S. M. AURORA

Deputy Director (Tex), ISI

Leather Articles for Weaving Subcommittee, TDC 21 : 1

Convener

SHRI I. M. MANSURI

The All India Picker and Textile Leather Manu-
facturers' Association, Ahmadabad

Members

SHRI C. D. C. KARAKA (*Alternate to*
Shri I. M. Mansuri)

SHRI S. A. BANDEKAR

SHRI K. R. BIKSHESWARAN

SHRI T. S. K. MAHADEVAN

SHRI J. K. KHANNA (*Alternate*)

SHRI M. K. MEHTA

SHRI P. F. GUPTA (*Alternate*)

SHRI S. P. PANDIT

SHRI K. B. VORA

SHRI U. C. SHARMA (*Alternate*)

The Millowners' Association, Bombay

Tullis Woodroffe & Co (Madras) Private Ltd,
Madras

Central Leather Research Institute (CSIR), Madras

The Ahmadabad Millowners' Association,
Ahmadabad

Western India Tanneries Ltd, Bombay

The Textile & Allied Industries' Research Organiza-
tion, Vadodara

Indian Standard

SPECIFICATION FOR LOOM PICKERS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 8 August 1977, after the draft finalized by the Textile Mill Leather Articles Sectional Committee had been approved by the Textile Division Council.

0.2 This standard prescribes tolerance on the dimensions and mass which are same as given in the corresponding Textile Committee's Inspection Regulations.

0.3 This standard forms a part of a series of Indian Standards on pickers of various shapes and dimensions corresponding to different types of looms. Other standards published so far in the series are given on page 10.

0.4 For the convenience of users, the manufacturer should mark the side of the picker which should be used first so as to get longer life.

0.5 To familiarize the industry with International System of Units (SI Units) the basic SI Units as well as the recommended SI Units for use in the textile industry are given in Appendix A.

0.5.1 Standards of weights and Measures Act, 1976 also stipulates use of SI units.

0.6 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers tolerance on dimensions and mass and requirements for workmanship, finish, etc, of loom pickers made of leather, raw-hide, synthetic rubber, plastics, etc.

2. MATERIAL

2.1 Raw-Hide or Leather Pickers

2.1.1 Only fully seasoned (natural/vacuum impregnated in sperm oil),

*Rules for rounding off numerical values (*revised*).

stout and heavy buffalo hide free from sun burns, putrefaction, etc, should be used.

2.1.2 The chemicals used for dehairing shall not impair the strength of hide (*see also* IS : 8546-1977*).

3. DIMENSIONS AND MASS

3.1 The mass, length, width, thickness, slot width or spindle hole, diameter, etc, shall be as given in the relevant standard (*see* **0.3**) unless otherwise specified in the contract.

3.2 The following tolerances shall be applicable to the dimensions and mass of the picker:

<i>Characteristics</i>	<i>Underpick Loom Picker</i>	<i>Overpick Loom Picker</i>
Overall length, width and thickness (to the nearest 0.1 mm)	$\begin{matrix} + 0 \\ - 2 \end{matrix}$ percent	± 5 percent
Slot width, mm	$\begin{matrix} + 0 \\ - 2 \end{matrix}$ percent	—
Spindle hole diameter	—	Clearance of $\begin{matrix} + 1.0 \\ - 0.0 \end{matrix}$ mm over the corresponding spindle diameter
Mass (to the nearest gram)	± 4 percent	± 5 percent

4. WORKMANSHIP AND FINISH

4.1 At slots, edges, corners and exposed surfaces, the picker should be free from sharp edges and rough surfaces.

4.2 The fasteners (staples, rivets, etc) should not unnecessarily protrude beyond the surface of picker.

4.3 No interlayer interstices shall be permitted.

4.4 The overpick loom picker shall freely slide on the smooth, polished and straight spindle (*see* IS : 7043-1973†) of the corresponding diameter. The spindle holes shall be coaxial.

NOTE — To ensure better performance of 4 B pickers oval shape may be provided at shuttle tip and striking point in the case of all pickers, and also at spindle hole in the case of leather and raw-hide pickers only.

*Requirements of leather or raw-hide exclusively used in the manufacture of loom pickers.

†Specification for loom (fly) spindles.

5. PACKING

5.1 The pickers shall be packed in a suitable package as detailed in the contract.

6. MARKING

6.1 Each package or picker (as applicable) shall have the following information suitably marked:

- a) Type of picker;
- b) Length (mm), width (mm), thickness (mm) and mass (g);
- c) Spindle hole (mm) (in case of overpick loom pickers) or slot width (mm) (in case of underpick loom pickers);
- d) Side of the picker to be used first;
- e) Name or trade-mark of the manufacturer; and
- f) Number of pickers in the package.

6.1.1 The loom picker may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

7. SAMPLING

7.1 A lot shall consist of all the pickers in a consignment made of same material and having same nominal dimensions, shape, mass, etc.

7.2 Sampling Plan — The sample size and acceptance number depending upon the lot size shall be as follows unless otherwise specified:

<i>Lot Size</i>	<i>Sample Size</i>	<i>Acceptance No.</i> <i>(Permissible No. of Defectives)</i>
Up to 100	8	0
101 „ 150	13	1
151 „ 300	20	2
301 „ 500	32	3
501 „ 1 000	50	5
Above 1 000	80	7

APPENDIX A

(Clause 0.5)

SI UNITS

TABLE 1 INTERNATIONAL SYSTEM OF UNITS

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	CONVERSION
Force	newton	N	1 N = 1 kgf. 1 m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

TABLE 2 RECOMMENDED SI UNITS FOR TEXTILES

Sl. No.	CHARACTERISTIC	SI UNIT		METRIC UNIT		APPLICATION
		Unit	Abbreviation	Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1)	Length	Millimetre	mm	—	—	Fibres
		Millimetre, centimetre	mm, cm	—	—	Samples and test specimens (as appropriate)
		Metre	m	—	—	Yarns, ropes and cordages, fabrics
2)	Width	Millimetre	mm	—	—	Narrow fabrics
		Centimetre	cm	—	—	Other fabrics
		Millimetre, centimetre	mm, cm	—	—	Samples and test specimen (as appropriate)
		Centimetre, metre	cm, m	—	—	Carpets, druggets, durries (as appropriate)
3)	Thickness	Micrometre (micron)	μ m	—	—	Delicate fabrics
		Millimetre	mm	—	—	Other fabrics, carpets, felts
4)	Linear density*	Tex	tex	—	—	Yarns
		Millitex	mtex	—	—	Fibres
		Decitex	dtex	—	—	Filament and filament yarns
		Kilotex	ktex	—	—	Slivers, ropes and cordages
5)	Diameter	Micrometre (micron)	μ m	—	—	Fibres
		Millimetre	mm	—	—	Yarns, ropes, cordages
6)	Circumference	Millimetre	mm	—	—	Ropes, cordages

*For conversion of values in traditional counts to the tex and vice versa, reference to IS : 3689-1966 ' Conversion factors and conversion tables for yarn counts ' shall be made.

(Continued)

TABLE 2 RECOMMENDED SI UNITS FOR TEXTILES — *Contd*

Sl. No.	CHARACTERISTIC	SI UNIT		METRIC UNIT		APPLICATION
		Unit	Abbreviation	Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
7)	Threads in cloth:					
	a) Length	Number per centimetre	ends/cm	—	—	Woven fabrics (as appropriate)
		Number per decimetre	ends/dm	—	—	
	b) Width	Number per centimetre	picks/cm	—	—	
		Number per decimetre	picks/dm	—	—	
8)	Warp threads in loom	Number per centimetre	ends/cm	—	—	Reeds
9)	Stitches in cloth:					
	a) Length	Number per centimetre	courses/cm	—	—	Knitted fabrics (as appropriate)
		Number per decimetre	courses/dm	—	—	
	b) Width	Number per centimetre	wales/cm	—	—	
		Number per decimetre	wales/dm	—	—	
10)	Stitch length	Millimetre	mm	—	—	Knitted fabrics Made-up fabrics
11)	Mass per unit area	Grams per square metre	g/m ²	—	—	Fabrics
12)	Mass per unit length	Grams per metre	g/m	—	—	Fabrics
13)	Twist	Turns per centimetre	turns/cm	—	—	Yarns, ropes (as appropriate)
		Turns per metre	turns/m	—	—	
14)	Test or gauge length	Millimetre, centimetre	mm, cm	—	—	Fibres, yarns and fabric specimens (as appropriate)

15)	Breaking load	Millinewton	mN	grams force	gf	Fibres, delicate yarns (skeins or individual)
		Newton	N	kilogram force	kgf	Strong yarns (individual or skeins), ropes and cordages, fabrics
16)	Breaking length	Kilometre	km	—	—	Yarns
17)	Tenacity	Millinewton per tex	mN/tex	grams force per tex	gf/tex	Fibres, yarns (individual or skeins)
18)	Twist factor or twist multiplier	Turns per centimetre \times square root of tex	turns/cm $\times \sqrt{\text{tex}}$	—	—	Yarns (as appropriate)
		Turns per metre \times square root of tex	turns/m $\times \sqrt{\text{tex}}$	—	—	
19)	Bursting strength	Newton per square centimetre	N/cm ²	kilogram force per square centimetre	kgf/cm ²	Fabrics
20)	Tear strength	Millinewton	mN	grams force, kilogram force	gf, kgf	Fabrics (as appropriate)
		Newton	N			
21)	Pile height	Millimetre	mm	—	—	Carpets
22)	Pile density	Mass of pile yarn in grams per square metre per millimetre pile height	g/m ² /mm pile height	—	—	Pile carpet
23)	Elastic modulus	Millinewton per tex per unit deformation	mN/tex/unit deformation	grams force per tex per unit deformation	gf/tex/unit deformation	Fibres, yarns, strands

NOTE — Where more than one unit has been given for one characteristic, any of the units may be used appropriate.

INDIAN STANDARDS
ON
TEXTILE MILL LEATHER ARTICLES

IS:

- 1225-1972 Leather picking band for looms (*first revision*)
- 1619-1976 Buffer band for cop-changing automatic looms
- 1737-1976 Spring buffers for cotton looms (*first revision*)
- 1903-1977 Recommendations on mass shape and dimensions of pickers for jute looms (*first revision*)
- 1906-1977 Recommendations on mass shape and dimensions of 4 B pickers (*second revision*)
- 3446-1977 Leather aprons for drafting systems (*first revision*)
- 6300-1971 Picker savers (formaldehyde tanned leather)
- 8545-1977 Specification for loom pickers
- 8546-1977 Requirements for leather or raw hide exclusively used in the manufacture of loom pickers
- 8547-1977 Recommendations on shape and dimensions of single box pickers for automatic looms